Operational Quality Metrics FAQs
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1. Why is the Census Bureau releasing the Operational Quality Metrics?

In the years following each decennial census, the Census Bureau releases metrics evaluating the quality of data collection operations and resulting population data in assessments and evaluations. This year, we are releasing select quality indicators sooner. We believe early insight into how well the 2020 Census was managed and implemented is vital given concerns about how census results may have been affected by the coronavirus pandemic, natural disasters, and other widespread events that occurred during data collection.

A first set of metrics, available in April 2021, describes how data for all addresses, including housing units and group quarters, were collected. A second set, available in May 2021, focuses on how housing unit data were collected and describes the population size of occupied housing units. Later in 2021, we will release additional metrics providing insight into the quality of the 2020 Census.

2. What are the differences between the first and second Operational Quality Metrics releases?

Each set of Operational Quality Metrics shows a different angle of how 2020 Census data were collected, providing insight into the quality of operations across the nation.

Release 1 (April 2021) describes how we gathered information for all addresses included in the 2020 Census. This broad, comprehensive view provides context behind each operation and data collection method for addresses including:

- Housing units: Places where residents live or stay separately, such as houses, apartments, or mobile homes.
- Group quarters: Places where residents live or stay in a group living arrangement, such as nursing homes, college dormitories, and military barracks.

The first release does not include:

- Transitory locations included in the Enumeration at Transitory Locations (ETL) operation, such as RV parks or marinas.
- Addresses added late in data collection, or between the September 27, 2020, deadline for adding new addresses and the October 15, 2020, response deadline.

Release 2 (May 2021) focuses on all housing units confirmed in the 2020 Census, rather than all addresses included in the census. This set of metrics leverages the Census Bureau's work in processing 2020 Census responses to include data for transitory locations collected in the ETL operation, as well as data for housing units added late in data collection. Because this release is focused on housing units confirmed to exist in 2020 Census operations, group quarters and deleted units are not included.

3. What other quality metrics will the Census Bureau release for the 2020 Census?

The Census Bureau plans to release additional Operational Quality Metrics around the time when the redistricting data products are available. Final decisions on the specific metrics will be made later this summer. We will also release a host of assessments and evaluations in the coming years. The topics of these reports vary widely, including assessments of each data collection operation, assessments of communication and outreach methods, and evaluations that analyze, interpret, and synthesize the effectiveness of census components and their impact on data quality, coverage, or both.

In addition, the Census Bureau is engaged in several efforts to assess the quality of the 2020 Census. These include comparing results to 2020 Demographic Analysis Estimates, conducting the Post-Enumeration Survey to measure coverage error, and collaborating with external experts who will provide independent quality analyses.

See the 2020 Census Data Quality page for a detailed summary of these efforts.

4. Are the Operational Quality Metrics available for smaller geographies, such as counties, cities, towns, and census tracts?

The Operational Quality Metrics will only be available for the nation, each of the 50 states, the District of Columbia, and Puerto Rico. While there is interest in data at levels of geography below the state level, it is important to note that the Census Bureau is required by law to safeguard the privacy of respondents and the confidentiality of their responses. This requires that we balance the level of detail we provide, especially for smaller geographies, with that need for confidentiality. Future assessment and evaluation reports will include summary-level information that has been reviewed for disclosure risk for substate geographies, such as data visualizations, averages, and measures of variation. Results will be shared as soon as they are available.

5. Will the Census Bureau release detailed data behind the Operational Quality Metrics to the public, such as frequency counts and microdata?

No, the microdata and frequency counts used to calculate these metrics will not be released to the public because of privacy and confidentiality requirements.

6. What disclosure avoidance techniques have been applied to the Operational Quality Metrics?

All metrics included in the Operational Quality Metric releases have been rounded, and reviewed for disclosure risk, in accordance with U.S. Census Bureau disclosure review standards. No differential privacy techniques were applied to Release 1 (April 2021). Disclosure avoidance protections were applied to Release 2 (May 2021) metrics to prevent disclosure of official statistics yet to be released.

7. Will the Operational Quality Metrics detail how the coronavirus pandemic affected 2020 Census operations?

The metrics we release in April and May will provide many results and insights into how the 2020 Census was conducted. Variability in the results across states and across operations is expected. Factors within our control, such as planned changes to the way we collected data, and factors outside our control, such as normal changes in our population, respondent behavior, and the coronavirus all play a part. Attributing a difference or magnitude of a difference to a specific factor will be nearly impossible. Rather, our analysis will focus on understanding if the differences we see are explainable given the collective factors.

8. Why are there differences between results included in the Self-Response Rates Map and the Operational Quality Metrics?

The Operational Quality Metrics use final, processed census data to describe how the nation's addresses were counted. On the other hand, to inform the country about how each community was responding throughout the 2020 Census, the [2020 Census Self-Response Rates Map](#) focused on housing units invited to self-respond.

These percentages measure two different things for different purposes. The Self-Response Rates Map measured participation during the 2020 Census among households that were invited to respond on their own online, by phone, or by mail. These rates are available down to the census tract level and were key to informing outreach during the 2020 Census. They also helped us plan for the volume of addresses census takers would need to follow up with to collect responses in-person.

The percentages in the Operational Quality Metrics take a broader view. The first release (April 2021) looks at self-response among *all addresses* in the 2020 Census — not just among households invited to respond on their own. By looking at all addresses, we're able to show a breakdown of what percentage was resolved through self-response, another operation, or remained unresolved. For example, the denominator for the percentage in the operational metrics also includes:

- Households in very remote areas like parts of northern Maine and remote Alaska that are counted in person by a census taker.
- Group quarters such as college dorms, prisons, and nursing homes.

The second release (May 2021) leverages census data processing results to look at self-response among *all housing units* identified in the 2020 Census. In addition to housing units invited to self-respond, these include:

- Households in remote areas counted by a census taker, as in the first release.
- Places like boats, tents, and RVs counted as part of the Enumeration of Transitory Locations operation.

To describe household residents and how their data was collected, the second release does not include deleted units.

The operational metrics also take into account our data processing procedures, which include unduplication, matching responses submitted without a Census ID to existing addresses, and adding new addresses.

9. Why are there differences between some of the Operational Quality Metrics and preliminary 2020 Census results that were released earlier?

We released several preliminary quality indicators to help others begin to assess the quality of the census. For example, we released preliminary metrics on Administrative Records usage in the Nonresponse Followup (NRFU) operation and NRFU proxy enumeration rates. These rates changed because we resolved cases and removed duplicate responses during data processing.

10. What factors should I consider when making comparisons between the 2010 and 2020 censuses?

Comparisons between the 2010 and 2020 Operational Quality Metrics reveal how and whether 2020 Census results align with trends seen in the previous census, a meaningful indicator of data quality. However, in addition to demographic and behavioral shifts over the past decade, many differences are a result of operational changes and new factors in the 2020 Census environment.

The Census Bureau leveraged new technological innovations to increase the efficiency and accuracy of self-response operations, Nonresponse Followup (NRFU), and census data processing. The 2020 Census was the first decennial census that incorporated an online self-response option as the primary mode of data collection. Both the census questionnaire, as well as the targeted advertisement campaign used to encourage self-response, were offered in more languages than in previous censuses. We also contacted households using new, targeted mailing strategies.

The NRFU operation incorporated several improvements including integration of the survey instrument and enumerator management systems on an iPhone. In addition for the 2020 Census, the administrative records matching process was added to use high-quality data we already have about households to avoid costly field enumeration. The addition of the internet self-response instrument and streamlined systems allowed self-response to continue throughout NRFU, thus removing cases from the NRFU workload in real time. The 2020 Census also incorporated improvements to the training, contact strategies, and management of NRFU census takers.

New data processing procedures were added in the 2020 Census to help us meet our mission of counting everyone once, only once, in the right place. For example, a new process was added to use administrative records to place individuals that were recorded in multiple households in the right address. To do this, we used administrative records that were unavailable in previous decennial censuses. Because of this operation, some addresses were left unresolved without a population count, which can be found in the "Unresolved, Person Unduplication" category of the operational quality metrics.

Lastly, 2020 Census operational timelines and procedures were adapted to respond to unexpected, widespread events. These include the coronavirus pandemic, tropical storms, hurricanes, wildfires, and legal challenges.

These are among the factors contributing to differences between the 2020 Census and prior censuses.

11. What factors should I consider when making comparisons between states?

States differ in their basic characteristics, making it problematic to draw conclusions about differences in data quality between states as measured by operational metrics. Decennial census data collection strategies are targeted by geographic area depending on population characteristics and geographic characteristics. For more information about how census operations varied across the country, see the [2010 Census Local Census Offices with Type of Enumeration Area map](#), the [2020 Census Type of Enumeration Viewer, and the 2020 Census Mail Contact Strategies Viewer.](#)

Population trends and varying impacts of natural disasters and the coronavirus pandemic also resulted in varying 2020 Census Operational Quality Metrics between states.

12. Why were there higher rates of deleted addresses in the 2020 Census relative to the 2010 Census?

The increase in deleted units during the 2020 Census is an expected outcome of increased operational efficiencies, and the Census Bureau's commitment to a complete, accurate population count.

In the 2010 Census, more deletes occurred before rather than during enumeration. Before 2010 Census enumeration began, field staff were sent to check the existence of each address across the country in an operation called Address Canvassing. Addresses deleted from our address list during Address Canvassing were not included in 2010 Census data collection. Any addresses deleted during enumeration were sent to the Vacant Delete Check operation for confirmation as one of the last steps in the 2010 Census.

To improve the efficiency of Address Canvassing, the 2020 Census leveraged satellite imagery, administrative data, and other in-office sources to verify the existence of residential addresses rather than checking each location in-person. Staff were sent out to verify addresses only where change was detected or reliable satellite imagery was unavailable. High-quality addresses deleted during Address Canvassing remained in 2020 Census enumeration operations for confirmation from census field staff, analogous to the 2010 Census Vacant Delete Check operation. In the situations where no one resided at the addresses, these deleted units were often confirmed by proxy respondents in Nonresponse Followup.

As a result of allowing these deleted units to remain in the enumeration universe and following up with them during the 2020 Census enumeration, there appear to be more deletes relative to 2010.